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10/797,577	03/11/2004	Satoshi Kume	403003/TAKADA	4813

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EXAMINER

MACARTHUR, SYLVIA

ART UNIT	PAPER NUMBER
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1763

MAIL DATE	DELIVERY MODE
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05/16/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/797,577	Applicant(s) KUME ET AL.	
	Examiner Sylvia R. MacArthur	Art Unit 1763	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) 7-14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>See Continuation Sheet</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of claims 1-6 in the reply filed on 2/21/2007 is acknowledged.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 2-6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
4. Claims 4-6 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are: the relationship between the stage, the first and second UV radiating units, and the chemical solution coating unit. The invention as illustrated in Figs. 1 and 2 describes a wet etching apparatus with a stage, a storage unit or lamp house accommodating a first and second UV radiating unit that is located above the stage and a chemical coating unit that is configured to supply coating to the substrate while the substrate is radiated. The current claims convey various interpretations, to include: a) multichamber unit comprising a plurality of chamber wherein one of the chambers comprises a chemical coating unit, another chamber comprises a first radiating unit, and another chamber comprises a second radiating unit, wherein

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at least one of the said plurality of chambers has a stage, another possible interpretation is b) a multichamber unit with a chamber comprising a first radiating unit, a second chamber comprising a second radiating unit wherein both chambers comprises a stage and treatment fluid supply and c) a wet etching apparatus with a stage, a storage unit or lamp house accommodating a first and second UV radiating unit that is located above the stage and a chemical coating unit that is configured to supply coating to the substrate while the substrate is radiated.

Furthermore, a wet etching apparatus is claimed, yet no limitation is present to positively recite the liquid etching unit (supplying the etchant). It is the examiner's position that a chemical solution coating unit inherently exists, as a film is present and has been disposed upon the substrate by such unit.

5. Claims 2 and 3 recites the limitation "the film" in line 3 of each claim. There is insufficient antecedent basis for this limitation in the claim.

Double Patenting

6. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

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Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

7. Claims 1 and 3-6 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-7 of copending Application No. 10/765,272 to Kume et al in view of Hiramoto et al (US 5,510,158).

This is a provisional obviousness-type double patenting rejection.

The prior art of Kume et al claims a wet etching apparatus.

Regarding claim 1: Kume et al claims an ultraviolet light radiation unit, but fails to claim a first and second UV radiating units.

Hiramoto et al teaches a process for oxidizing an article wherein a first UV radiating unit 102 radiates UV light having a wavelength of less than 200nm, specifically 172 nm as recited in col. 9 lines 1-20 and a second UV light radiating unit radiating UV light exceeding 200nm, specifically 254nm as recited in the paragraph joining cols. 10 and 11 – col. 11 line 20, see Figs. 8 and 9.

The motivation to use the ultraviolet light radiation units 102 and 103 of Hiramoto is that the first radiating unit provides the first significant feature of a path-braking measure in which a dielectric barrier discharge lamp is used to emit light with a wavelength of 172nm as a vacuum UV ray with high efficiency. The irradiating unit of Hiramoto provides a second significant feature of the simultaneous use of lamp with emits a light of a wavelength of 254 nm, producing a high concentration of activated oxygen is produced from ozone with a high efficiency while increasing the activity, see the paragraph joining cols 4 and 5 to col. 5 line 25 . Thus, it would have been obvious for one of ordinary skill in the art at the time of the claimed invention to use the irradiating units of Hiramoto et al in the co-pending application of Kume et al.

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Regarding claim 3: Claim 2 of the co-pending application of Kume et al claims that the UV radiating component radiates UV light having energy higher than binding energy of constituent molecules of the film.

Regarding claim 4: The co-pending application of Kume et al claims a wet etching apparatus comprising a stage and a nozzle in the chemical solution supply component (chemical-solution coating unit). The co-pending application of Kume et al fails to claim first and second UV radiation units.

Hiramoto et al teaches a process for oxidizing an article wherein a first UV radiating unit 102 radiates UV light having a wavelength of less than 200nm, specifically 172 nm as recited in col. 9 lines 1-20 and a second UV light radiating unit radiating UV light exceeding 200nm, specifically 254nm as recited in the paragraph joining cols. 10 and 11 – col. 11 line 20, see Figs. 8 and 9.

The motivation to use the ultraviolet light radiation units 102 and 103 of Hiramoto is that the first radiating unit provides the first significant feature of a path-braking measure in which a dielectric barrier discharge lamp is used to emit light with a wavelength of 172nm as a vacuum UV ray with high efficiency. The irradiating unit of Hiramoto provides a second significant feature of the simultaneous use of lamp with emits a light of a wavelength of 254 nm, producing a high concentration of activated oxygen is produced from ozone with a high efficiency while increasing the activity, see the paragraph joining cols 4 and 5 to col. 5 line 25 . Thus, it would have been obvious for one of ordinary skill in the art at the time of the claimed invention to use the irradiating units of Hiramoto et al in the co-pending application of Kume et al.

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Regarding claim 5: The co-pending application of Kume et al claims a pipe supplying ultra-pure water, water comprises oxygen and thus provides an oxygen ambient/oxidizing atmosphere.

Regarding claim 6: Claim 2 of the co-pending application of Kume et al claims that the UV radiating component radiates UV light having energy higher than binding energy of constituent molecules of the film.

Also, note that regarding claims 3 and 6, these claims are interpreted as a matter of an intended use in that the claim recite that the energy of the second UV irradiation unit is higher than the binding energy of the film. "The film" refers to a film disposed upon the substrate which is not part of the structure of the claimed apparatus and thus does not structurally limit the apparatus of the co-pending application as modified by Hiramoto.

8. Claim 2 is provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-7 of copending Application No. 10/765,272 to Kume et al in view of Hiramoto et al (US 5,510,158) as applied in claims 1 and 3-6 above, in further view of Kinoshita et al (US 6,631,726).

The apparatus of the co-pending application of Kume et al using the irradiating units 102 and 103 of Hiramoto et al were discussed above. The co-pending application further claims a storage component (storage unit) for accommodating the light source, a light transmitting window, see claim 4.

The co-pending application fails to claim that the storage unit is filled with an inert gas.

The modified apparatus of Kume et al in view of Hiramoto fails to suggest that the storage unit is filled with an inert gas.

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Kinoshita et al teaches an apparatus for processing a substrate comprising a lamp house provided with dielectric barrier discharge lamps to irradiate a substrate with UV light. Col. 5 lines 40-49 teaches that the lamp house (storage unit) is filled with an inert gas. Therein, Kinoshita et al teaches that the motivation for filling the lamp house with an inert gas, nitrogen is to maintain the an oxygen free atmosphere within the lamp house.

Thus, it would have been obvious for one of ordinary skill in the art at the time of the claimed invention to use the teaching of Kinoshita et al to provide an inert gas to fill the lamp house (storage unit) in the apparatus of Kume et al with the irradiating units (lamps 102 and 103) of Hiramoto et al.

9. Claims 1 and 3 –6 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 7-9 of copending Application No. 10/441,061 to Otake et al.

Regarding claim 1: Otake claims an excimer lamp that irradiates vacuum UV light of wavelength 172 nm (less than 200 nm) , interpreted as the first UV irradiation unit and an excimer lamp that irradiates a UV light at 190 to 310 nm (with a range that exceeds 200nm), interpreted as the second irradiation unit. Thus, the claim of the present invention is anticipated by or fully encompasses the potentially conflicting patent.

Regarding claim 4: Claim 8 of Otake et al teaches a stage, a first (excimer lamp of UV wavelength 172 nm) and second UV irradiation unit (excimer lamp of UV wavelength 190-310 nm) and a chemical coating unit (a function water supply mechanism). The limitation reciting the chemical coating unit is interpreted as a matter of an intended use. The apparatus of Otake et

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al claims a supply mechanism for water, note what is supplied does not structurally limit the mechanism used to supply the water, i.e. piping an is inherently capable of supplying the chemical solution coating.

Regarding claim 5: The co-pending application of Otake et al claims a pipe supplying functional water, water comprises oxygen and thus provides an oxygen ambient/oxidizing atmosphere.

Regarding claims 3 and 6, these claims are interpreted as a matter of an intended use in that the claim recite that the energy of the second UV irradiation unit is higher than the binding energy of the film. "The film" refers to a film disposed upon the substrate which is not part of the structure of the claimed apparatus and thus does not structurally limit the apparatus of the co-pending application held to Otake et al.

10. Claim 2 is provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 7-9 of copending Application No. 10/441,061 to Otake et al, as applied in claims 1 and 3-6 above, in view of Kinoshita et al (US 6,631,726).

The co-pending application fails to claim a storage unit for accommodating the light source. Consequentially, Otake et al fails to claim a transmission window and an inert gas fills the storage unit.

Kinoshita et al teaches an apparatus for processing a substrate comprising a lamp house provided with dielectric barrier discharge lamps to irradiate a substrate with UV light. Col. 7 lines 32-47 teaches that the lamp house (storage unit) 112 having a transmitting window 112a is filled with an inert gas. The motivation of using the storage unit/lamp house of Kinoshita et al is

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that it provide a mechanism to completely enshroud the UV radiating units to seal the inert gas within the storage unit. Col. 5 lines 40-49 teach the motivation of using the inert gas in the lamp house. Therein, Kinoshita et al teaches that the motivation for filling the lamp house with an inert gas, nitrogen is to maintain the an oxygen free atmosphere within the lamp house.

Thus, it would have been obvious for one of ordinary skill in the art at the time of the claimed invention to use the lamp house (storage unit) of Kinoshita et al to simplify the construction of the irradiation unit and provide an inert gas to fill the lamp house (storage unit) in the apparatus of Otake et al.

Claim Rejections - 35 USC § 102

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

12. Claims 1 and 3-6 are rejected under 35 U.S.C. 102(a) as being anticipated by Matsuno et al (JP 2002-3160141, refer to the English Translation also provided).

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent..

Matsuno et al teaches a treating apparatus using a first dielectric barrier lamp and a second dielectric barrier lamp, see Figs, 1 and 3-7.

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Regarding claim 1: The apparatus of Matsuno et al teaches a first UV radiation unit (lamp 6, lamp group 41,63) having a wavelength not exceeding 200nm 120-190 nm, near 172 nm see [0015] and a second UV radiation unit (lamp 7, lamp group 42,66) having a wavelength exceeding 200nm, in the range of 200-240 nm, near 222nm, see [0015]. See also [0024, 0025, and 0028].

Regarding claims 3 and 6: This claim is interpreted as a matter of an intended use in that the claim recite that the energy of the second UV irradiation unit is higher than the binding energy of the film. "The film" refers to a film disposed upon the substrate which is not part of the structure of the claimed apparatus and thus does not structurally limit the apparatus of Matsuno et al. See also [0013] wherein Matsuno et al teaches that the second irradiation unit teaches decomposition by the photochemical reaction with the UV rays.

Regarding claim 4: Matsuno teaches stage 34 is Fig.3, stage that holds the substrate 43 in Fig.4, a stage 64 is Fig. 6 and stage 72 in Fig.7. The apparatus of Matsuno et al teaches a first UV radiation unit (lamp 6, lamp group 41,63) having a wavelength not exceeding 200nm 120-190 nm, near 172 nm see [0015] and a second UV radiation unit (lamp 7, lamp group 42,66) having a wavelength exceeding 200nm, in the range of 200-240 nm, near 222nm, see [0015]. See also [0024, 0025, and 0028]. Regarding the chemical-solution coating unit a chemical solution coating unit inherently exists though unshown as [001] teaches that an amorphous Si thin film is disposed upon the substrate.

Regarding claim 5: Section [0019] teaches that hydrogen peroxide is supplied which anticipates an oxygen atmosphere. Note [0021] teaches other sources of oxygen used.

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13. Claims 1 and 3 are rejected under 35 U.S.C. 102(b) as being anticipated by Hiramoto et al (US 5,510, 158).

Hiramoto et al teaches a process for oxidation of an article.

Regarding claim 1: Hiramoto et al teaches a process for oxidizing an article wherein a first UV radiating unit 102 radiates UV light having a wavelength of less than 200nm, specifically 172 nm as recited in col. 9 lines 1-20 and a second UV light radiating unit radiating UV light exceeding 200nm, specifically 254nm as recited in the paragraph joining cols. 10 and 11 – col. 11 line 20, see Figs. 8 and 9.

Regarding claim 3: This claim is interpreted as a matter of an intended use in that the claim recite that the energy of the second UV irradiation unit is higher than the binding energy of the film. “The film” refers to a film disposed upon the substrate which is not part of the structure of the claimed apparatus and thus does not structurally limit the apparatus of Hiramoto et al.

Claim Rejections - 35 USC § 103

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuno et al or Hiramoto et al in view of Kinoshita et al (US 6,631,726).

The apparatus of Matsuno et al was discussed above.

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Therein Matsuno et al teaches a first and second irradiation units 6/7 and 41/42 as illustrated in Figs. 1/3 and Fig.4 respectively. In Figs. 1 and 3, Matsuno et al illustrates the UV units 6 and 7 is the same housing in [0014] they are recited as being part of a plate but fails to teach the specific storage unit. Likewise in Fig. 4, 41 and 42 are illustrated as being in abutment with one another. Having the two irradiation units 41 and 42 in integrated construction would simplify the structure as already taught in Fig. 1 of Matsuno et al.

Similarly, the apparatus of Hiramoto et al was discussed above.

Hiramoto like Matsuno et al fails to specifically teach the storage unit and the transmission window and inert gas.

Kinoshita et al teaches an apparatus for processing a substrate comprising a lamp house provided with dielectric barrier discharge lamps to irradiate a substrate with UV light. Col. 7 lines 32-47 teaches that the lamp house (storage unit) 112 having a transmitting window 112a is filled with an inert gas. The motivation of using the storage unit/lamp house of Kinoshita et al is that it provide a mechanism to completely enshroud the UV radiating units to seal the inert gas within the storage unit. Col. 5 lines 40-49 teach the motivation of using the inert gas in the lamp house. Therein, Kinoshita et al teaches that the motivation for filling the lamp house with an inert gas, nitrogen is to maintain the an oxygen free atmosphere within the lamp house.

Thus, it would have been obvious for one of ordinary skill in the art at the time of the claimed invention to use the lamp house (storage unit) of Kinoshita et al to simplify the construction of the irradiation unit and provide an inert gas to fill the lamp house (storage unit) in the apparatus of Matsuno et al or Hiramoto et al.

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16. Claims 4-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hirae et al (US 2001/0001392) in view of Hiramoto et al.

Hirae et al teaches a wet etching apparatus as illustrated in Figs 2-7. The apparatus comprises a stage 1 and a nozzle 7 (reads on the chemical solution coating unit) as it is structurally capable of supplying a chemical solution for the purpose of coating. Note this limitation is interpreted as a matter of an intended use.

Hirae et al teaches a movable irradiating unit 31 , but fails to teach the irradiating unit comprises first and second irradiating units.

Hiramoto et al teaches a process for oxidizing an article wherein a first UV radiating unit 102 radiates UV light having a wavelength of less than 200nm, specifically 172 nm as recited in col. 9 lines 1-20 and a second UV light radiating unit radiating UV light exceeding 200nm, specifically 254nm as recited in the paragraph joining cols. 10 and 11 – col. 11 line 20, see Figs. 8 and 9.

The motivation to use the ultraviolet light radiation units 102 and 103 of Hiramoto is that the first radiating unit provides the first significant feature of a path-braking measure in which a dielectric barrier discharge lamp is used to emit light with a wavelength of 172nm as a vacuum UV ray with high efficiency. The irradiating unit of Hiramoto provides a second significant feature of the simultaneous use of lamp with emits a light of a wavelength of 254 nm, producing a high concentration of activated oxygen is produced from ozone with a high efficiency while increasing the activity, see the paragraph joining cols 4 and 5 to col. 5 line 25 . Thus, it would have been obvious for one of ordinary skill in the art at the time of the claimed invention to use the irradiating units of Hiramoto et al in the apparatus of Hirae et al.

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Regarding claim 5: The stage of Hirae et al treats the substrate in ambient including oxygen as ozone water is supplied via feeder 21.

Regarding claim 6: This claim is interpreted as a matter of an intended use in that the claim recite that the energy of the second UV irradiation unit is higher than the binding energy of the film. "The film" refers to a film disposed upon the substrate which is not part of the structure of the claimed apparatus and thus does not structurally limit the apparatus of Hirae et al in view of Hiramoto et al.

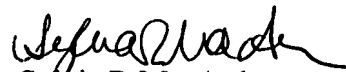
17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art of Arakawa (US 5,065,021) teaches a system for erasing (removing) a radiation image comprising a set of UV lamps 10 (wavelength range 300nm to 750 nm) and a different set of UV lamps 12 (wavelength shorter than 400 nm).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sylvia R. MacArthur whose telephone number is 571-272-1438. The examiner can normally be reached on M-F during the hours of 8:30 a.m. and 5 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Parviz Hassanzadeh can be reached on 571-272-1435. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Sylvia R MacArthur
Patent Examiner
Art Unit 1763

May 11, 2007

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :12/8/05 6/25/04, 3/11/04, 8/29/05.